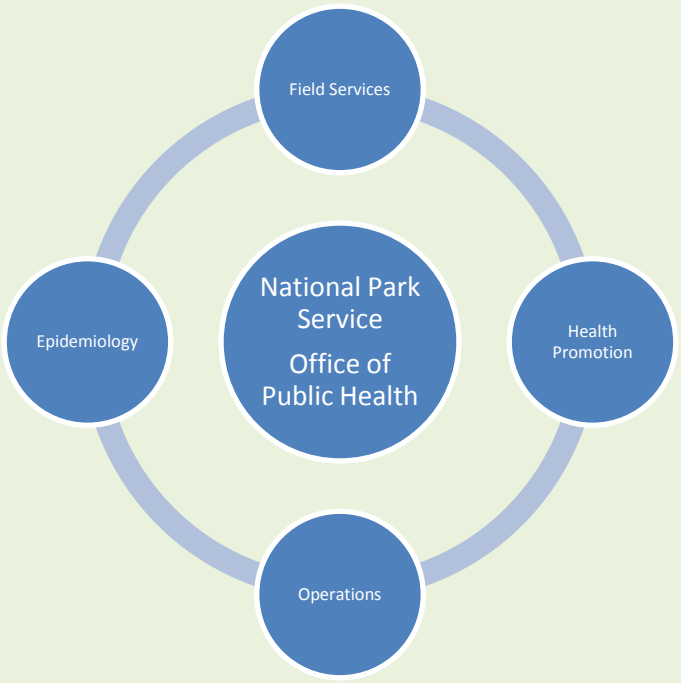
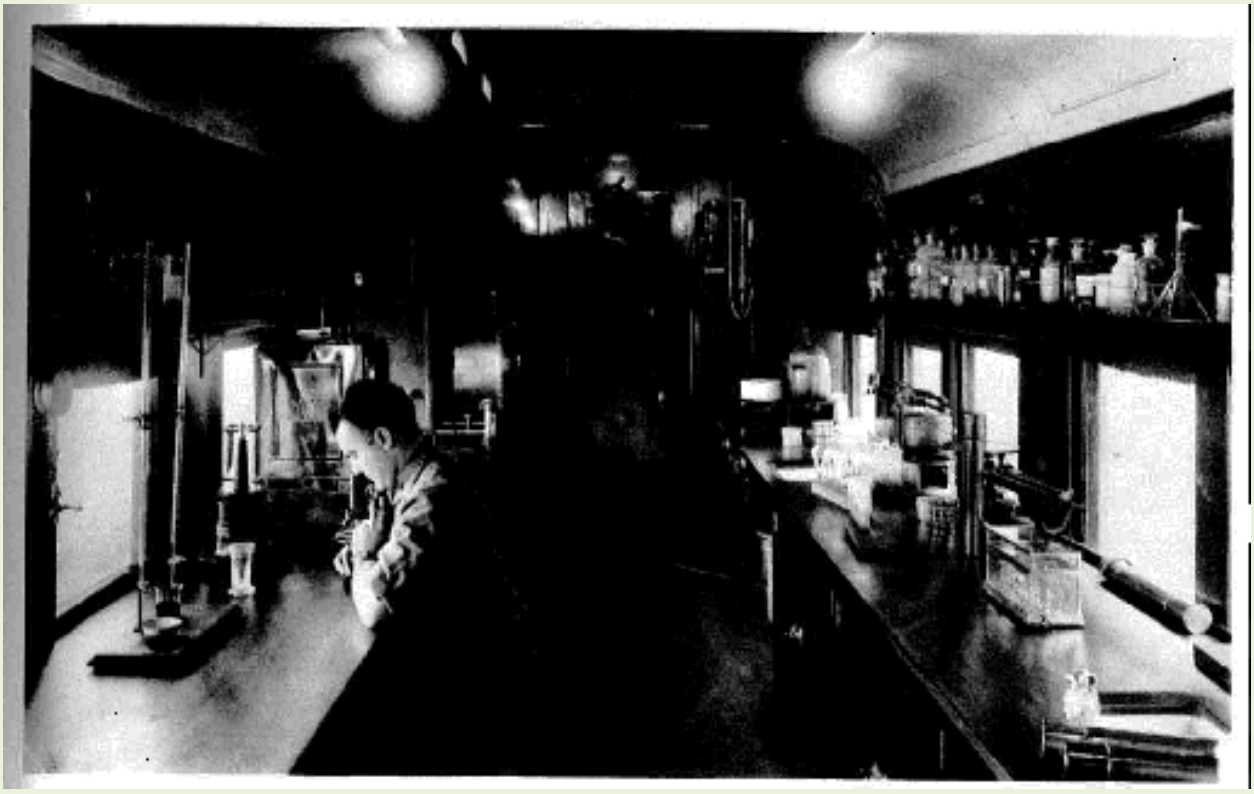


FY 2012 Annual Year End Report



PHS Rail Car Laboratory "Hamilton" - Used in the First Drinking Water Safety Survey of Yellowstone National Park in 1918

Executive Summary

Essentially a unique "internal health department" within the National Park Service (NPS), the NPS Office of Public Health (OPH) protects the health of almost 300 million visitors a year, illuminates and encourages ways to use our public lands to improve health and strives for an ecological model of public health practice.

Improving What We Do

In an effort to become more data-driven and to foster continuous improvement the NPS OPH continues to collect meaningful data across all of our activities. As you will see in this report, we are beginning to quantify our efforts and track results. This information not only allows us to report our findings but also to use this information to ask ourselves important questions about how we might become more effective and efficient.

Supporting the NPS Mission

The national park system protects some of the most valued landscapes, ecosystems, cultural and historical treasures. Working with others in the Service including facilities management, commercial services, risk management and the Wildlife Health Branch, we continue to explore how the One Health concept can be of value to NPS managers. One Health advocates the interconnected nature of environmental stewardship, human health and the health of all species. This unified approach if applied to the NPS mission may help superintendents make management decisions that do not trade off one aspect of the mission against another but rather allow them win-win-win decisions.

Contributing to the Nation

The OPH is dedicated to supporting the NPS mission but at the same time we make contributions that are relevant beyond the national park system. These include improving the practice of environmental health, exploring how to detect disease transmission in transient populations, helping to translate the One Health concept into useful applications and taking purposeful action to tap into the power of open spaces and natural places to improve health and well being.

Introduction

Our Vision and Mission

The NPS Office of Public Health is the nation's premier ecologically-based public health activity, embedded within and serving a unique American idea: preserving, protecting, understanding, and enjoying our natural and cultural heritage.

The mission of the OPH is to assist the Service in providing for the enjoyment of our National Park System by protecting and promoting the health of the visiting public and to achieve this by methods that leave protected resources unimpaired for future generations

Our Organization

Since 1918, the U.S. Public Health Service (PHS) has partnered with NPS and currently provides most of the staffing for this activity through an interagency agreement. OPH also acts as the agent for the Department of the Interior (DOI) for the purpose of placing PHS officers in other assignments throughout the department.

OPH is a division located under the Associate Director for Visitor and Resource Protection and consists of three branches:

1. Operations – provides personnel services, budget preparation and execution, and serves as the liaison to the PHS Commissioned Corps;
2. Field Services – provides the majority of the division's direct service delivery to park units, conducts on-site public health evaluations of park operations, consults with park management and staff about visitor protections, and assists with all park specific division public health functions;
3. Epidemiology– conducts disease surveillance and response, coordinates with local, state, and federal health agencies; and
4. Health Promotion- leads the division's health promotion activities which are based on the NPS Healthy Parks Healthy People strategic plan.

Our Values

- We are wholly committed to the broader mission of the National Park Service and we are unconditionally constructive toward this end.
- We build on a legacy of visitor protection and honor the work of those who have came before us, hire the best, value and nurture our current team, respect each other and those we work for and with, and collaborate with any and all who might share our goals.
- We look to the future, explore, learn, refine, and perpetually seek continuous improvement, strive to be efficient and effective, and provide accountability to the American taxpayer.
- We conduct our work using the latest state of human knowledge, current science and defensible, peer-reviewed practice.

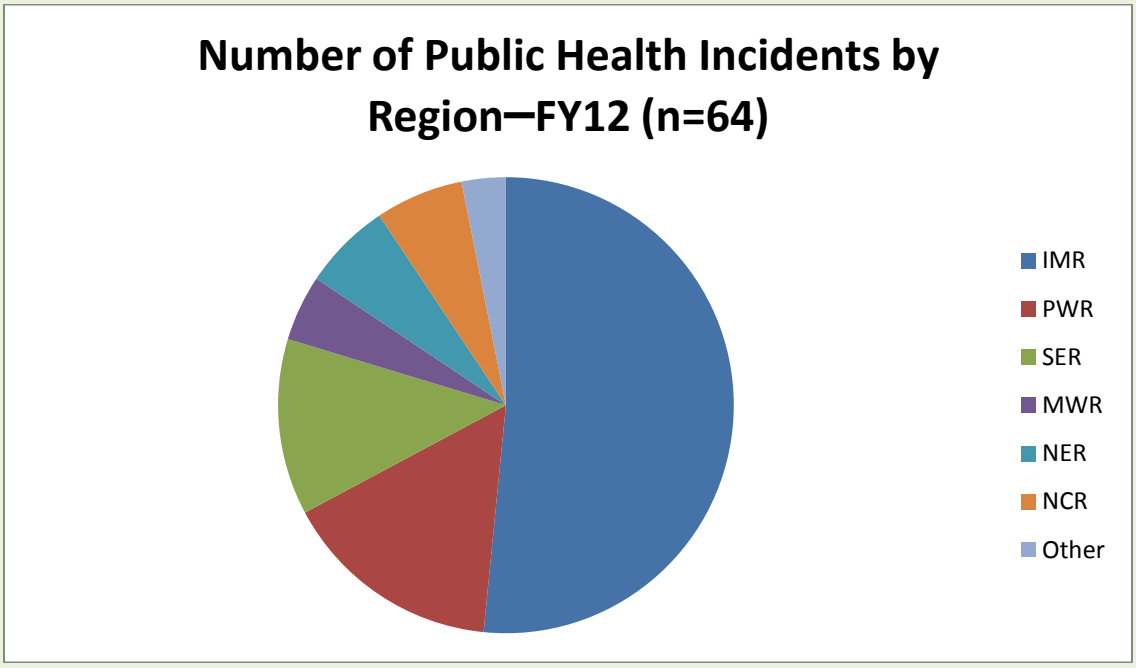
Epidemiology

The primary duties of the Epidemiology Branch include responding to outbreaks and human disease case reports, developing surveillance systems, and coordinating or leading park-based public health programs and research. Much of the activities are conducted in collaboration with OPH staff, NPS divisions, local/state health departments, the Centers for Disease Control and Prevention (CDC), and other partners. The branch is responsible for providing guidance to park managers and visitors on infectious diseases, environmental health issues, chemical exposures, and other public health threats.

Focus areas of the branch include One Health, surveillance of transient populations, electronic data sharing/informatics, and developing and implementing public health interventions. The branch presents findings and projects at scientific conferences and in peer-reviewed journals. As a collateral duty, the branch also assists the Health Promotion Branch with developing physical activity and nutrition projects with healthcare and academic partners.

Disease Transmission, Outbreaks, and Response

All OPH staff assist in responding to infectious disease case reports, outbreaks, and other incidents potentially involving human disease transmission. These public health responses are primarily coordinated by the Epidemiology Branch Chief.



FY 2012 Summary

- Of the 64 total incidents, 62 occurred in 40 NPS units in 6 regions; 2 additional incidents involved DOI sister bureaus
- 52% of incidents occurred in the Intermountain Region
- 3 parks had 3 or more incidents (CAVE, GRCA, YEL)

- Incidents involved employees (28%), visitors (42%), employees and visitors (2%), wildlife (20%), or environmental threats to human health (8%)
- 21 incidents (33%) were investigated based on initial notification from a health department
- 61% of all incidents involved collaboration with a health department and/or the CDC
- All but 2 incidents were investigated within 48 hours of initial notification

Major Responses

- Hantavirus pulmonary syndrome outbreak at YOSE
- Multiple animal bites—two involving international visitors—at BIBE, CAVE, DEWA, DEVA, GLCA, and YELL
- Employee exposure to chemical vapors at CAVE visitor center
- Scabies outbreak at REDW
- Vibriosis associated with contaminated raw oysters at GOGA
- Tick-borne relapsing fever cluster at CEBR

Other Responses (Examples)

- Norovirus outbreaks at APPA, GRCA, and YOSE
- MRSA cluster at CAHA
- Tularemia outbreak in rabbits at DINO
- Red tide at PAIS
- False-positive hantavirus reports at BICA
- Asbestos contamination at an abandoned military site at GUIS

Disease and Outbreak Response Narratives

Hantavirus outbreak associated with exposure to tent-cabins in Curry Village—YOSE

In August 2012, the California Department of Public Health (CDPH) notified CDR David Wong of 2 confirmed cases of hantavirus pulmonary syndrome (HPS) in California residents who had visited YOSE; both case-patients had stayed in tent-cabins in Curry Village in June. These reports prompted a joint investigation by CDPH, NPS, and the CDC to identify additional cases, mitigate potential exposures, and notify the public about hantavirus risk. In total, 10 cases of HPS, including 3 fatalities, were identified. The only significant risk factor for becoming infected was staying in a signature tent-cabin in the Boystown area of Curry Village (9 of 10 case-patients). Unlike other tent-cabins, signature tent-cabins are insulated and have a unique double-walled design consisting of canvas exteriors and insulated, interior hard walls. Rodent infestations were detected in the insulation, and all 91 signature tent-cabins were closed indefinitely on August 28.

HPS is a rodent-borne disease found throughout much of the United States. Approximately 30 HPS cases are reported in the U.S each year. Infected rodents shed hantaviruses in urine, droppings, or saliva, and humans become infected by breathing contaminated air. HPS is not transmitted person-to-person. The Yosemite outbreak is the largest HPS outbreak in the U.S. since 1993.

Dr. Danielle Buttke led the investigation for OPH. Dr. Buttke conducted three site visits to YOSE and assisted the park with various activities, including notifying visitors about potential exposure, conducting inspections of tent-cabins and

other buildings, organizing and leading public health conference calls, and communicating with NPS managers and the media. Other PHS officers involved in the response included CDR Matthew Weinburke, LCDR Adam Kramer, CDR David Wong, and CAPT Chuck Higgins.

Visitor bitten by a rabid beaver—DEWA

On August 2, 2012, a visitor swimming in the Delaware River was attacked unprovoked and bitten multiple times by a beaver. The beaver was captured and then euthanized. Dr. Kevin Castle, a wildlife veterinarian with the Biological Resource Management Division, Dr. Buttke, and CDR David Wong coordinated with DEWA managers and the New Jersey, New York, and Pennsylvania State Public Health Veterinarians to expedite rabies testing for the beaver. The beaver was transported to the New York State Rabies Laboratory and tested positive for rabies within 36 hours after the visitor had been bitten. The visitor was promptly referred to a local hospital to start rabies post-exposure prophylaxis, and a press release was issued on August 3 to alert visitors about potential rabies risk at DEWA. This incident illustrates the importance and utility of approaching disease response activities using an interdisciplinary One Health approach.

Employee illnesses from exposure to chemical vapors —CAVE

On July 22, 2012, employees at CAVE arrived to work and discovered strong vapors permeating throughout the visitor center. The source of the vapors was paint, solvents, and solvent-soaked rags left in the upper elevator lobby by subcontractor employees who had been renovating the elevator shaft. These rags and other materials were soon removed from the building.

Over the next 36 hours, many CAVE employees reported acute-onset symptoms (e.g. headache, nausea, dizziness) presumed to be caused by exposure to the vapors; at least 17 employees were treated at local medical centers. After consultation with the Intermountain Regional Office, the park was closed on the afternoon of July 23. The park was reopened on July 25 after extensive air quality testing determined that volatile organic compound levels were safe.

CDR David Wong assisted the park by providing consultation about health effects from the chemical vapors and conducting an employee survey to document symptoms and assess risk factors for developing illness. Seventy-three of 100 CAVE employees completed the survey. Of the 60 employees who spent some time in the visitor center during the incident, 36 (60%) developed symptoms. The most common symptoms were headache (83%), drowsiness (67%), and eye irritation (33%). The average duration of symptoms was 2.6 days. Employees who worked for >2 hours in the Lower Lobby or Middle Wing of the Visitor Center on July 22 or 23 were over 4 times more likely to develop symptoms compared to employees who worked in these areas for ≤2 hours. These results were shared with employees and park managers and used to estimate visitor risk, which was determined to be minimal. Enhanced oversight of the elevator renovation work has been implemented since this incident.

Disease Surveillance

Another primary role of the OPH Epidemiology Branch is to develop surveillance systems to improve detection of NPS-associated infectious disease case reports and outbreaks. FY12 marked the fifth year of formal efforts to collect and analyze health data from two main sources: 1) park-based data, and 2) health department-based data (e.g., NPS-associated case reports that are reported to state health departments and the CDC). No new surveillance modules were initiated in FY12. Employee absenteeism and clinic data continue to be collected at several parks, including GLAC and YELL, where the data are used to improve early detection of gastroenteritis and respiratory disease clusters and inform response efforts. Expansion of surveillance efforts to other parks is planned for FY13.

CDR Wong is also chairing a new work group at the Council of State and Territorial Epidemiologists (CSTE) to improve collection of travel history data (e.g. visits to national parks) for notifiable disease case reports. This work group will develop methods and strategies to better identify clusters and outbreaks among park visitors and other transient populations.

Contribution to Mission

The Epidemiology Branch is a critical partner with local, state, and federal public health agencies in order to protect the health and safety of employees and visitors, a central tenet of the NPS mission statement. Wherever possible, activities are conducted in support of Director Jarvis' "Four Pillars"—stewardship, workplace enhancement, education, and relevancy.

FY12 Accomplishments:

1. Stewardship—The Epidemiology Branch must practice public health within the context of the NPS mission. In some cases, commonly recommended public health measures to control infectious diseases may negatively impact wildlife populations or the environment (e.g. large-scale spraying to suppress populations of mosquitoes or ticks).
    a. Co-authored a white paper from the Federal Inter-agency Integrated Pest Management work group highlighting the NPS mission and potential conflicts with the use of tick suppression methods in national parks
    b. Communicated the importance of environmental and wildlife stewardship in 4 articles published in peer-reviewed public health journals
    c. Gave 8 presentations on the NPS One Health approach to public health
    d. Participated in a one-month One Health sabbatical at the Colorado State University College of Veterinary Medicine and Biomedical Sciences
2. Workplace Enhancement
    a. Consulted with the Office of Risk Management and regional safety officials on >10 health issues affecting NPS employees
    b. Conducted a baseline nutrition environment assessment at 50 national parks to help improve the nutritional quality of food and beverage options for both employees and visitors
    c. Developed and disseminated a Valley fever fact sheet for archeologists
3. Education
    a. Mentored 7 trainees in epidemiology, field work, statistical analyses, and manuscript writing
    b. Developed a template for a One Health educational brochure series for visitors
    c. Gave guest lectures in epidemiology and public health at 3 universities
4. Relevancy of NPS to public health communities
    a. Co-authored a memorandum of understanding to enhance public health activities between NPS and the CDC
    b. Continued a cooperative agreement between NPS and the California Department of Public Health
    c. Established the NPS Office of Public Health as an official training site for 2 public health training programs sponsored by CDC
    d. Member of a federal work group advocating for the importance of an integrated national biosurveillance system, including biosurveillance data collected at national parks

Health Promotion/Healthy Parks Healthy People

Healthy Parks Healthy People is a global movement to harness the power of parks and public lands to contribute to people's health and well-being. The National Park Service, Healthy Parks Healthy People program promotes the fact that all parks – urban or wild land –can be cornerstones of the health and well-being of all species and the planet we share and advances a holistic approach that addresses people's physical, mental and spiritual health, and social well-being.

Defining features and attributes of Healthy Parks Healthy People US partnerships, projects, programs, and policies being applied in parks and public lands:

- Establishes the health and medical care community's use of parks as a healing tool and a vital component of healthy living'
- Increases citizen recognition of the value of parks to improve and maintain health and well-being;
- Promotes and encourages people to enjoy park benefits for physical and mental health, healing, and social well-being;
- Improves park access for populations who use parks infrequently (e.g. minorities, low income community residents) and other priority populations (e.g. youth, seniors);
- Demonstrates innovative approaches to promote healthy experiences in national parks.
- Contributes to the collection, analysis, dissemination and use of scientific information to inform our work.

Health Promotion Branch Responsibilities

FY2012 marks the inception of Healthy Parks Healthy People US as a formal program of the National Park Service, with staffing and the establishment of a Health Promotion Branch in the Washington Area Office (WASO), Office of Public Health, under the Associate Director, Visitor Resource and Protection.

The Health Promotion Branch Chief serves as a strategic planner, collaborative leader, and day-to-day manager of the NPS Healthy Parks Healthy People US program nationally. The Branch Chief works with NPS directorates, parks, programs, divisions, and partners, in support of activities that can result in healthy visitor experiences, protection and enhancement of healthy habitats, and advancement of the concomitant social, environmental and economic benefits of health promotion activities in parks. In this role, the Branch Chief is responsible for establishing national program priorities, guidelines, and for creating a program that is primarily a matrix organization superimposed on the existing hierarchical framework of the agency. In this way a number of dotted line relationships to staff are in place in order to advance the Healthy Parks Healthy People philosophy at all levels of the organization.

Responsibilities of the health promotion branch are aligned with the programs four strategic focus areas as follows:

- **Synergy & Alignment** - contributing to strategic goals and objectives of ongoing national plans and strategies including the NPS Call to Action, National Prevention Strategy, Healthy People 2020, and the Let's Move Campaign.
- **Demonstration Projects** - providing technical and scientific support for the development and implementation of park-based health promotion projects, programs, and policies;
- **Communications & Education** - creating education programs and communication tools to advance the Healthy Parks Healthy People approach at local, national, regional and international levels of involvement;

- **Research & Evaluation** - advancing the collection, dissemination and use of scientific information to support Healthy Parks Healthy People goals to promote people's physical, mental and spiritual health, and social well-being.

Key Accomplishments in FY12

Strategic Planning & Organizational Development

Key accomplishments that assisted in the strategic planning and organizational development of the NPS Healthy Parks Healthy People US program include the following:

- Issued the NPS Healthy Parks Healthy People US Strategic Action plan as a corollary to the agency's Call to Action Plan, (11/2011);
- Established the NPS Healthy Parks Healthy People US as a national program, with an administrative home in the NPS Office of Public Health, under the Associate Director, Visitor Resource and Protection, (11/2011);
- Incorporated the Healthy Parks Healthy People program into the Service wide Comprehensive Call, (1/2012);
- Secured $2.2 million in Healthy Parks Healthy People project funding for parks, (3/2012);
- Hired a Health Promotion Branch Chief/Healthy Parks Healthy People Program Lead, (5/ 2012);
- Established Healthy Parks Healthy People US awards program, (6/2012);
- Recruited 12 NPS staff on detail assignment to the Healthy Parks Healthy People Program (9/2012), to assist with the following set of deliverables :
    - Healthy Parks Healthy People Communications
    - Partnerships
    - Healthy Parks Healthy People Volunteer Guidebook
    - Healthy Parks Healthy People International Congress and EXPO
    - Healthy Parks Healthy People Park Scorecard
    - Youth and diverse, urban audience participation in Healthy Parks Healthy People programs
    - "National Healthy Parks Healthy People 101" webinar series

Service Wide Operational Accomplishments

Highlights of service wide accomplishments that champion the unique role of parks and public lands in contributing to a healthy civil society in 2012 are described below. All of these actions were achieved by staff in parks, programs and divisions across the system.

Synergy & Alignment

International Healthy Parks Healthy People Motion Adopted by IUCN

- Established IUCN Healthy Parks Healthy People Motion at the World Conservation Congress as a basis for international alignment and collaboration to advance the role of parks and protected areas in contributing to a healthy civil society.

National Prevention Strategy

- The National Park Service contributed elements of the National Prevention Strategy's interagency work plan, and participated in interagency round table meetings and discussions to explore opportunities for NPS participation and collaboration.

Federal Interagency Working Group on Environmental Justice

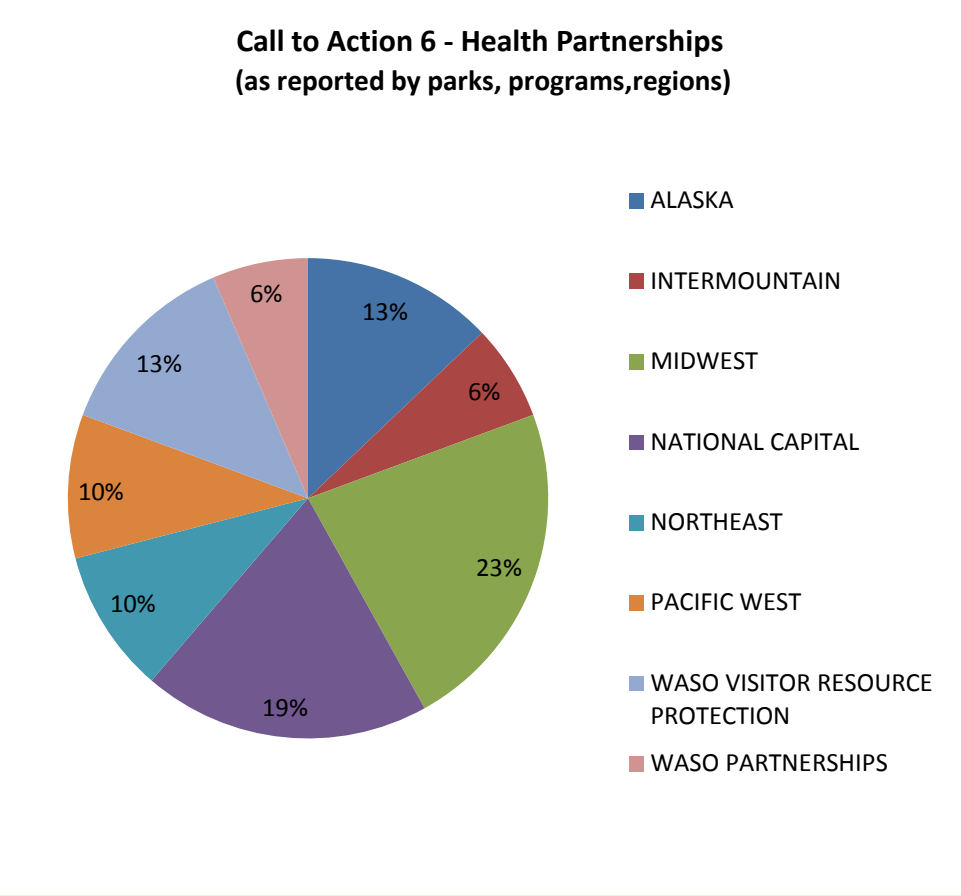
- The National Park Service provided input on response to public comments received at public listening sessions to explore opportunities for responding to environmental issues nationally. Healthy Parks Healthy People US was offered as one strategic approach to remedy environmental justice issues nationally.

NPS Call to Action 6 – Take a hike call me in the morning

- Parks, programs, regions and directorates reported 31 new partnership endeavors with the health and medical care community (26 formal partnership agreements and 5 informal partnership collaborations) in partial fulfillment of the NPS 5-year Call to Action goal to establish 50 such partnerships by 2016. These projects successfully leveraged approximately $1,500,000 in funding and in-kind support from health partners.

NPS Call to Action 8 – Eat well and prosper

- Parks reported 4 projects and events as contributing to this Call to Action goal to promote healthy, sustainable food and beverage offerings in national parks.
- NPS developed a Healthy Sustainable Foods policy to guide concession's standards for making healthy sustainable food choices available in parks that are affordable.



Nodes of Innovation and Demonstration Projects

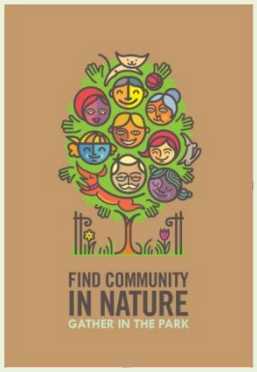
- Director Jarvis gave a key-note address at the NPHA annual conference (10/2011), and gave a guest lecture at Indiana School of Public Health entitled " National Parks and the Outdoors' Role in Public Health" (4/2012).

- The RTCA program established an interagency agreement with CDC to develop protocols for implanting Health Impact Assessments associated with parks and trails planning.
- Health Promotion Branch Chief served on CDC expert panel to explore a strategy and approach to address "Play Deserts" nationally;
- Health Promotion Branch Chief co-authored a Childhood Obesity Journal article entitled: "Let's Go to the Park Today: The Role of Parks in Obesity Prevention and Improving Public's Health;
- Parks hosted health promotion events targeted for high-risk populations and new park visitors. Examples include:
    - Navajo National Monument and Canyon De Chelly National Monument's participation in the Navajo Nation's "Just Move It" events to promote walking among 30,000 + people in parks and public lands;
    - Healthy Parks Healthy People Greater Washington DC Initiative targeting health promotion programs and events for youth and families in parks and public lands;
    - RTCA Healthy Communities partnership with National Association of Community Health Centers with a focus on diverse urban populations; Lake Clark National Park and Preserve's healing program for war veterans and their families at Samaritan Lodge;
    - Your Park Your Health park ambassador program with the American Heart Association at Gateway National Recreation Area targeting diverse urban youth;
    - Get Outdoors Under the Arch health fair at Jefferson National Expansion Memorial
    - Parks and trails prescriptions programs in parks across the country including Sitka, Golden Gate, C&O, National Mall, Rock Creek Park, Indiana Dunes, Jewell Cave;
    - Various Let's Move Outside Junior Ranger Programs and events were held at parks including Hot Springs, Mississippi National River and Recreation Area, Fort Scott, Vicksburg, and Lowell.

- NPS staff participated in meetings and conferences at national and global levels of involvement to promote the goals of Healthy Parks Healthy People, including the CDC, HHS, NAACP, National Public Health Association, International Union for Conservation of Nature, Robert Woods Johnson Foundation, Illumination Entertainment, and parks and conservation agencies in Canada, Republic of Korea, South Africa, and Australia;

Communications and Education

- The RTCA program assisted in planning and execution of 3 national webinars in collaboration with CDC, NRPA, NASPD with a focus on health promotion.
- NPS established a co-leadership role for the CDC to join with the NPS in hosting the second Healthy Parks Healthy People International Congress and EXPO in Atlanta in June 2014;
- NPS launched health promotion graphics and messaging in tandem with Get Outdoors month in June. A deck of colorful poster graphics were developed.



- The National Park Service hosted an employee Earth Day event on April 18 for WASO employees with the theme "Sustaining Healthy Parks and Healthy People".

- A "Get Outdoors! Be SunWise" educational window display was created in collaboration with the NPS Office of Risk Management and parties to a SunWise Agreement with the US Environmental Protection Agency. The
- display was designed for public viewing at street level in Rockefeller Plaza in the month of June. The window was designed to promote the health benefits of parks in tandem with health messaging, and included a looped video
- with national park scenes and messaging, and a QR code with links to a website. Partners on the project included NPS, US Environmental Protection Agency, the Shade Foundation, and EHE Health Prevention

Company based in New York City. The window was visible by television viewing audiences during portions of the Today Show in June, during outdoor concerts (estimated viewing audience 4.4 million). Live street-level viewing was available 24/7 for visitors to Rockefeller Plaza, including thousands who attended a live Justin Bieber concert where the exhibit was prominent.

- Provided consultation assistance to 80+ parks to assist in development of Healthy Parks Healthy People projects to assist with park planning, educational programming, events, policies, research, and partnerships to promote and provide healthy park visitor experiences.

Research and Evaluation

- Co-hosted a Healthy Parks Healthy People Science Workshop with Clemson University, February 2012. This workshop was conducted as a precursor to preparing a Healthy Parks Healthy People Science Plan, which is expected to be issued Spring, 2013.
- Conducted a Nutrition Study of National Park Service to establish baseline information on food and beverage offerings in national parks.

SERVICE TO THE NATIONAL PARK SERVICE MISSION

The NPS Healthy Parks Healthy People program advances the National Park Service mission to ". . .preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world."

The NPS Healthy Parks Healthy People program provides opportunities for people to have fun, learn something, and be healthy, and in doing so, helps build people's recognition and reliance on the role of parks in contributing to the health of all species and the planet we share. We subscribe to the World Health Organization's definition of health which states that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

A logic model has been developed to illustrate how the program specifically works to inspire and educate people to enjoy parks for their contribution to people's health and well-being, and to foster society's reliance and support for the life-sustaining role of parks in contributing long-term environmental, economic and social benefits (see attached).

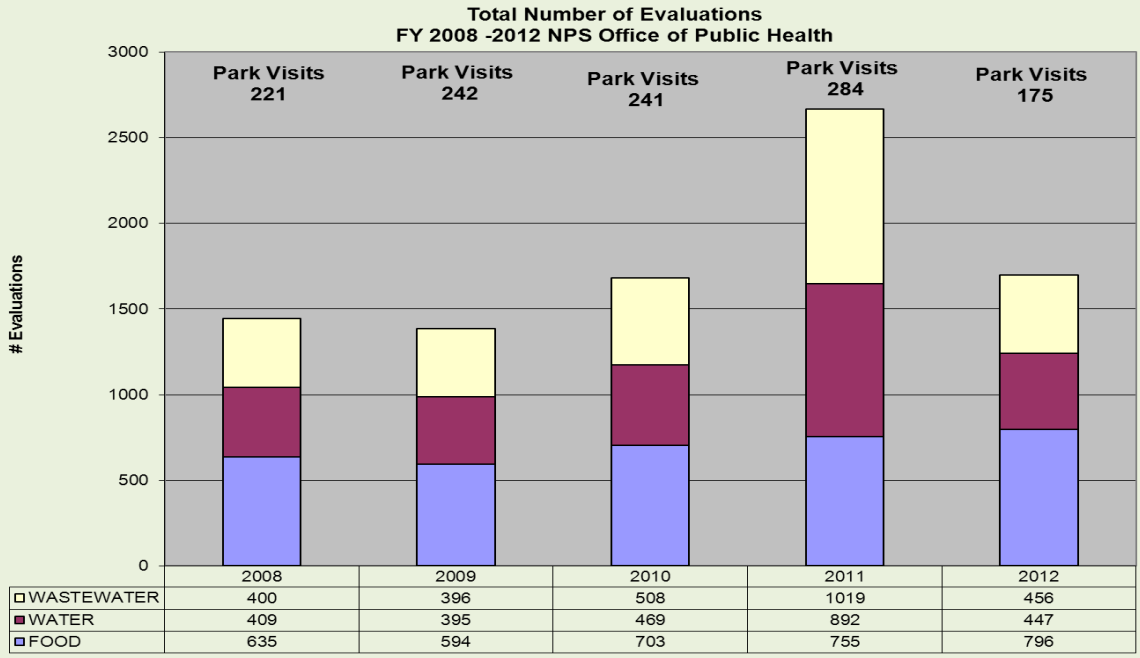
This logic model illustrates how the NPS Healthy Parks Healthy People US program contributes directly to the National Park Service Mission.

INPUTS	ACTIONS	OUTPUTS	SHORT-TERM OUTCOMES/BENEFITS	LONG TERM OUTCOMES/BENEFITS
National Park Service Mission **The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.**				
NPS • Staffing • Funding • In-Kind	**Projects** • Programs • Events • Policy • Plans **Education** • Multi-media outreach • Trainings, Webinars, Conferences **Research** • Healthy Parks Healthy People Consortium • Healthy Parks Healthy People Research **Alignment** • NPS Call to Action • National Prevention Strategy • Healthy People 2020 • Let's Move • IUCN • WHO	# First Time/New park visitors # At risk populations served (youth, aging, military veterans) # New health partnerships # Policies & plans # Healthy habitats enhanced or protected # Events in parks # Park and trail prescriptions filled # Active visits in Parks # Healthy Parks Healthy People nominations and awards # New conservationists # Jobs created # Volunteer hours served # Outdoor skills developed #'s from Webpage & Social Media Analytics # News Media Reports # Research findings published # Invited speaking engagements # Training, conference participants	***Inspiration*** • *Motivated to enjoy a healthy park experience* • *Motivated to practice a healthy lifestyle* • *Motivated to protect parks and public lands* ***% Healthy visitor experiences – Be Healthy*** ***Education*** • *Increased knowledge of health benefits of parks (human and environmental)* ***Increased awareness of the value of park health resources – Learn Something*** ***Enjoyment*** • *Positive visitor experience* ***% Visitor satisfaction -Have Fun***	*Society's reliance on the life-sustaining role of parks in contributing to a healthy civil society that includes environmental, economic and social benefits.* ***Environmental*** • *Protection of natural and cultural resources unimpaired for future generations.* ***Economic*** • *Reduced cost of health care* • *Improved workforce productivity* ***Social*** • *Reduced risk of chronic disease and early mortality* • *Increased rates of healing* • *Reduced crime rates* • *Community resilience* • *Social cohesion*

Field Services Branch

The Field Services Branch (FSB) is a national program that delivers environmental health services, technical assistance and consultation for NPS regions and parks in the protection and promotion of visitor and employee health. FSB consultants use on-site evaluations to advise parks regarding control measures to manage public health hazards related to water supplies, waste water systems, and food service facilities. Consultants also coordinate with other NPS divisions and the Office of Public Health Epidemiology Branch for zoonotic or human illness outbreaks. In addition to the above tasks, the FSB is available for consultation on all public health related park specific issues, providing informal and formal training to park staff and assisting with emergency response as needed.

Environmental Health – 2012 a Year of Transition



	2008	2009	2010	2011	2012
WASTEWATER	400	396	508	1019	456
WATER	409	395	469	892	447
FOOD	635	594	703	755	796

Figure 1. Total Number of Evaluations

During 2012, the Field Services Branch experienced broad organizational changes that affected the level of service provided. On an organizational level, to increase collaboration between the Office of Public Health (OPH) and Office of Risk Management (ORM), CDR Sara Newman, from the ORM, was appointed to Deputy Director for the Field Services Branch to provide management support, strategic planning, and program development in promotion and support of the work performed within the FSB. Additionally, two junior officer positions that had been supported by Facilities Management were defunded; three senior officers retired (Pacific West Region, Southeast Region, and National Capital Region) during the first half of the year and were not refilled until late in the fiscal year and the beginning of FY13. One officer transferred out of the program, and one officer transferred from the Intermountain Region to the National Capital Region. These transitions have resulted in a 58% vacancy of the field positions for a majority of the year. These vacancies resulted in an overall decrease in the number of park visits and evaluations as compared to previous years.

Environmental Health: Food and Water/Waste Water Evaluation Data Summary

Food Safety

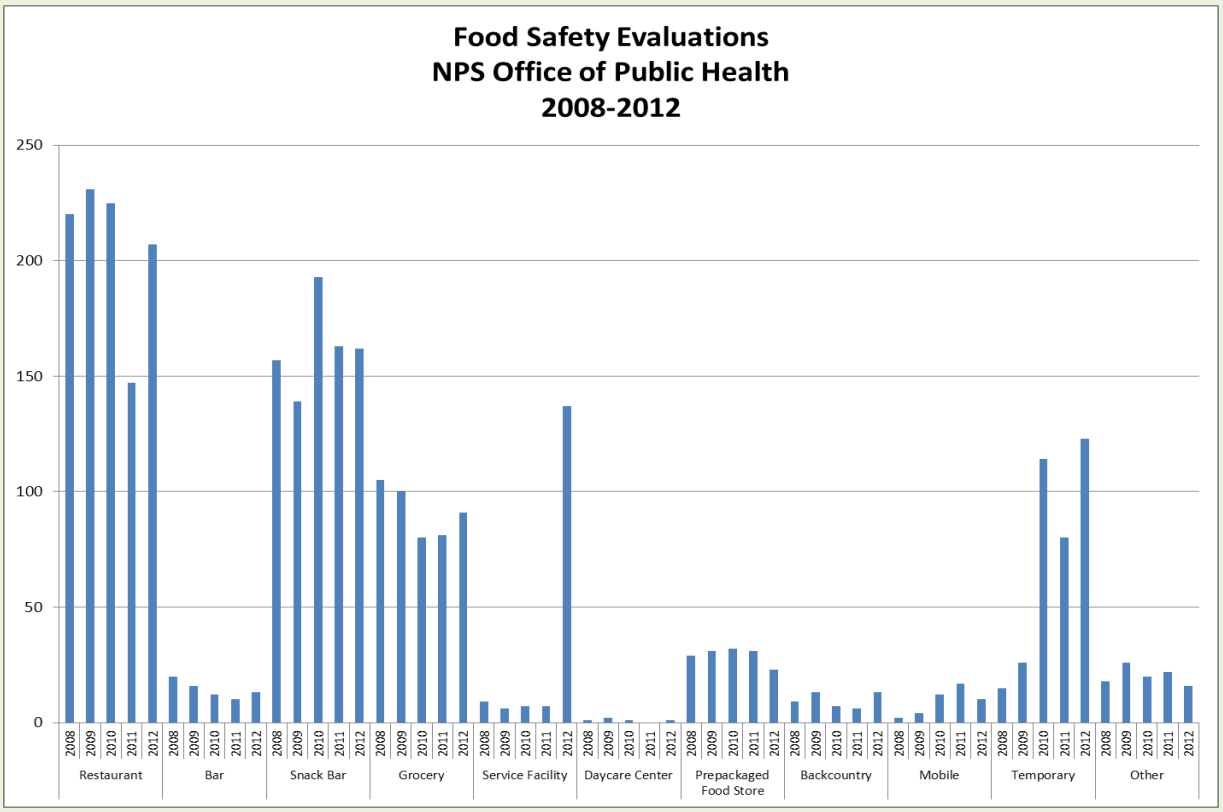


Figure 2. Number of Food Safety Evaluations

The program has continued to prioritize food safety, and conducted an average of 1.3 evaluations per facility over the year. The largest increases in evaluations occurred in service facilities at GOGA (a common kitchen area used by multiple temporary food event vendors) and in Temporary Food Events at GOGA, GATE, and NCR.

Operational Performance

In July, the FSB adopted an improved performance rating system that scores individual violations and then allows for tempering of a rating up one level based on the level of active managerial control that the facility has implemented (five point likert scale from non-existent to proactive).

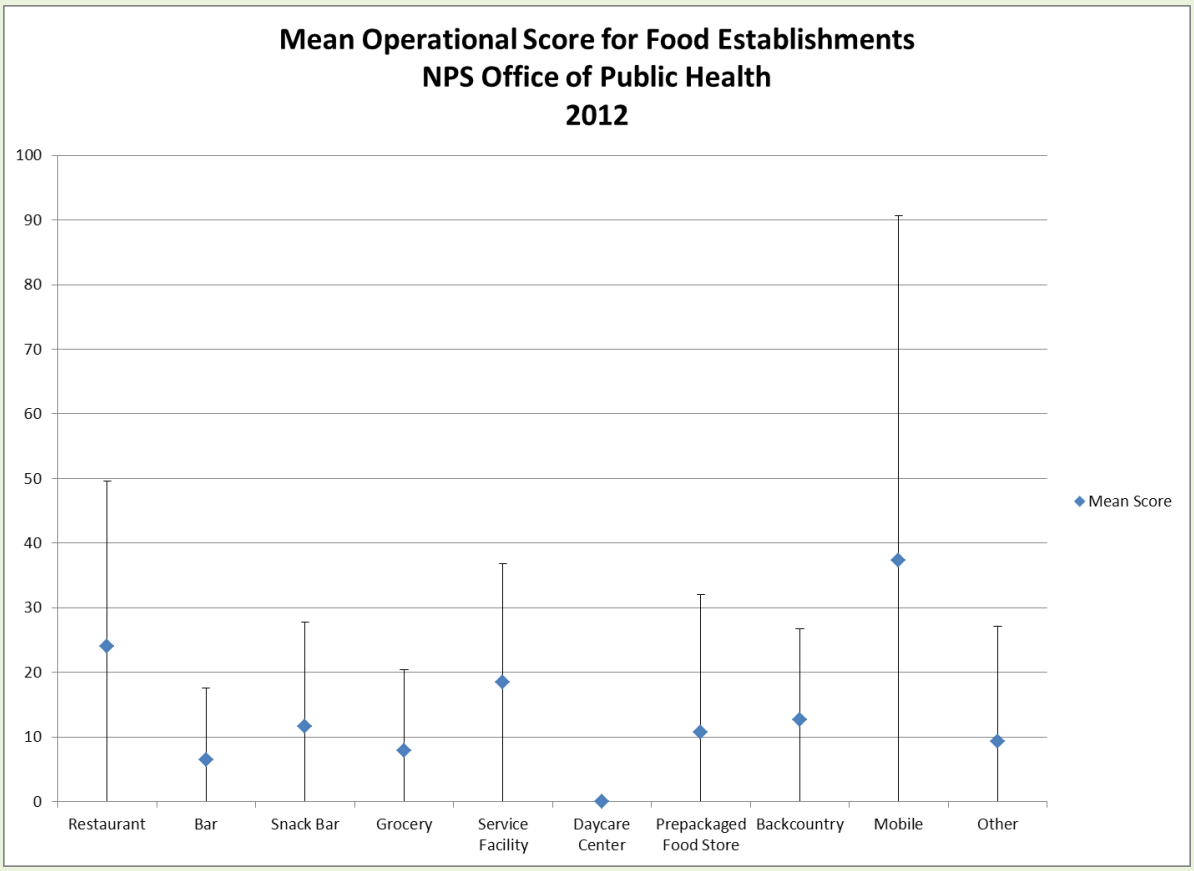


Figure 3. Mean Operational Score for Food Service Establishments

The Operational Score uses a weighted scoring system with Priority Violations being worth 15-20 points, Priority Foundation Violations being worth 5-10 points, and core violations worth 1-3 points. The scoring system starts at 0 then rises with the violations that are noted. The average scores are reflected in the number of priority violations that are noted per evaluation.

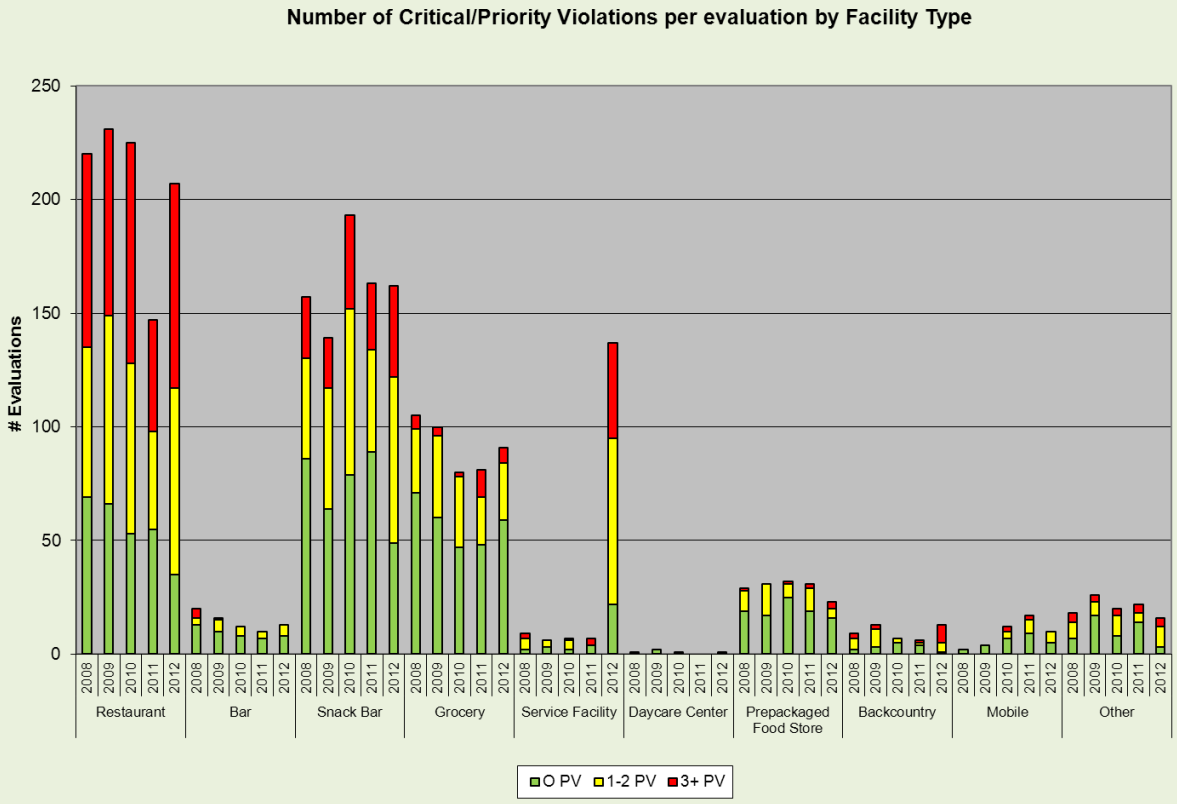


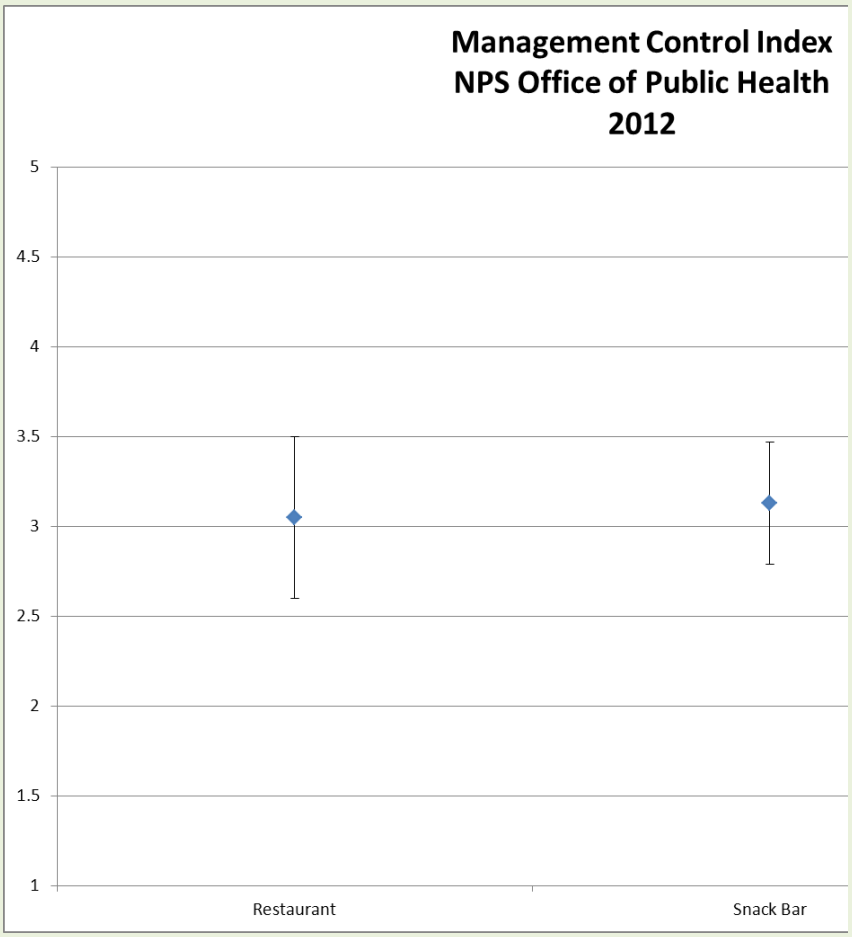
Figure 4. Number of Priority Violations Noted per evaluation

Figure 4 shows an increase in priority violations in Restaurants, Snack Bars, and Service Facilities from 2011 to 2012, the greatest comparative increase in violations in 2012 as compared to previous years occurred in Service Facilities Approximately, 80% of the Priority violations were related to food handling (e.g. improper temperature control of food, cross-contaminating cooked and raw food, etc.) and 6% were Personnel related (e.g. Failure to wash hands or improperly washing hands, etc.).

TOP FIVE PRIORITY VIOLATIONS – below are the most frequently cited violations that are most often associated with causing illness

1. Cold Holding (30% of evaluations)
2. Hot Holding (5.4% of evaluations)
3. Improper Sanitization of dishes (3.8% of evaluations)
4. Improper Cooling of food (3.5%)
5. Bare hand contact with ready to eat foods (3.4% of evaluations)

Based on the food service evaluations and critical violations observed, FSB consultants discussed appropriate management strategies and interventions with food facility operators, concessioners, and NPS staff.



Management Control Index

5 – Proactive

4 – Well Developed

3 – Basic

2 – Under Developed

1 – Nonexistent

The Index is created by examining the level of policies that are present to address the risk factors for foodborne illness, how they train their employees to the policies, and how they verify that the actions are occurring.

Figure 5. Management Control Index Score for the Risk Factors Associated with Causing Foodborne Illness

In general, the restaurants and snack bars exhibited a basic level (level 3 on a scale of 1-5) of active managerial control for the risk factors for foodborne illness. In order to move from basic (3) to well developed (4), food establishments would need to maintain written food safety policies, conduct ongoing training in addition to basic food safety training at the time of hire, and maintain written records of how they have verified that there policies have been followed. Examining the system strengths showed that Participatory Management (74.7% of evaluations) and Knowledgeable Food Handlers (60% of evaluations) continue to be the two strongest strengths followed by Limited Scope of Operations (53.6% of evaluations).

Overall, 93% of the facilities received Satisfactory Ratings; 5.7% received Marginal Ratings; and 1.3% received Unsatisfactory Ratings.

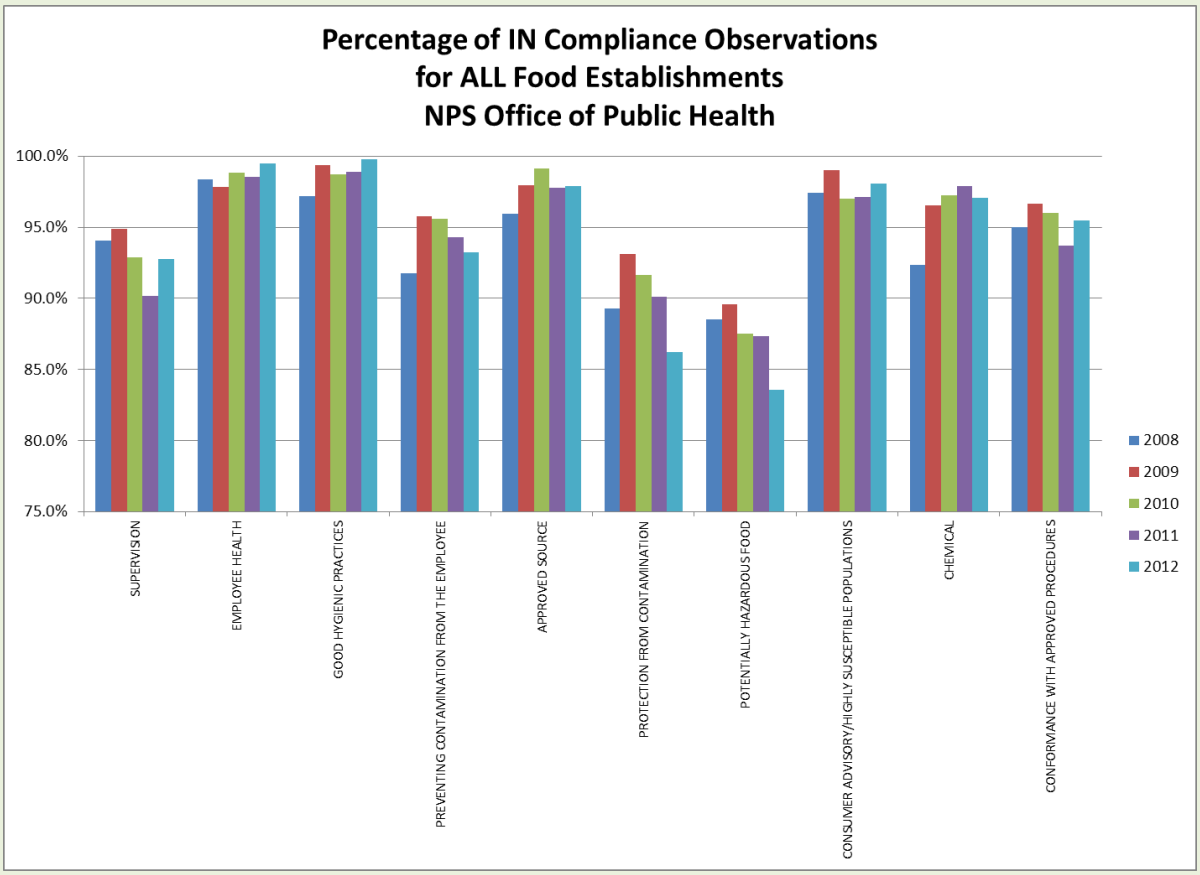


Figure 6. IN Compliance rate for Risk Factors most commonly associated with Foodborne Illness

During an evaluation, the risk factors for foodborne illness are evaluated and marked if they are observed to be IN or OUT of compliance with the food code, or if they are Not Observed or Not Applicable to the operation. In general the rate of compliance has been fairly steady over the past five years, with protection from contamination and temperature control of potentially hazardous food providing the largest challenges. Nearly a quarter (22%) of the cold holding food temperatures were recorded as out of compliance (n=2512), while 10% of the hot holding temperatures (n=736), and 4.2% of the cooking temperatures (n=143) were also recorded as non-compliant.

Goals for FY13 for Food Safety

- Orientation of new staff into the systems-based approach to food safety.
- Development of a Plan Review Manual for construction and remodeling of food facilities. This would be shared with DSC and Park units that are considering remodeling or adding a food facility to clearly denote the minimum requirements for the facility.

Drinking Water and Wastewater Systems

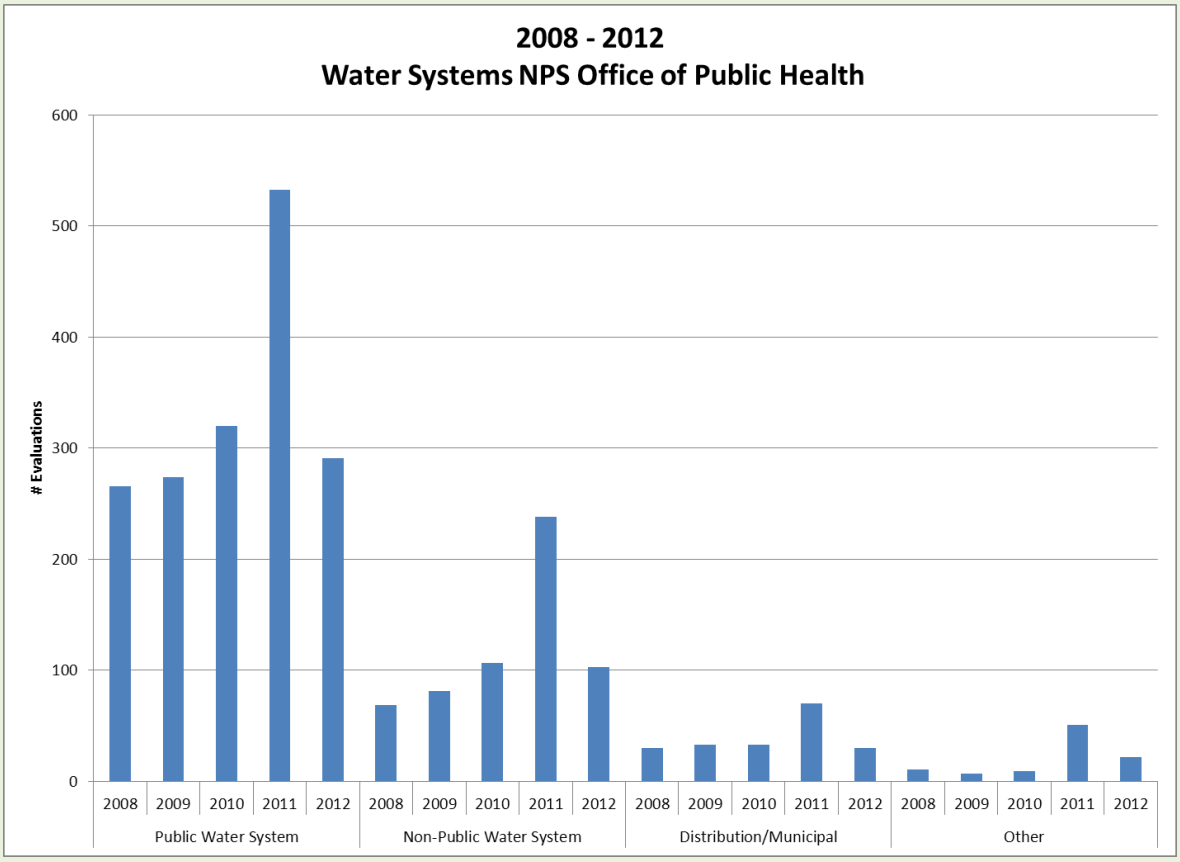


Figure 7. Number of Water System Evaluations Conducted

The majority of systems reviewed in 2012 were potable drinking water systems. Due to the gap in staffing within the Field Services Branch, as described earlier, this year saw a 50% decrease in the number of water and wastewater systems evaluated.

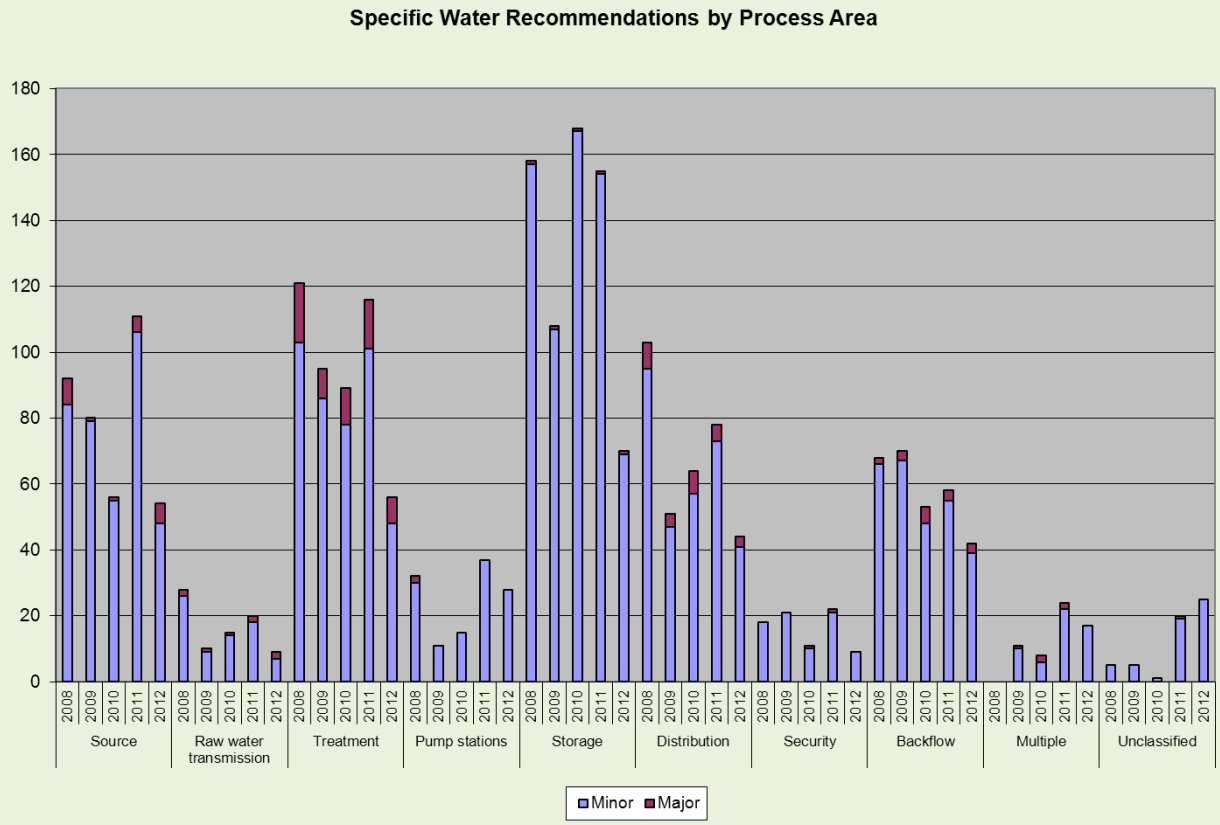


Figure 8. Water System Recommendations by Process Area

The overall decrease in the number of violations is most likely correlated with the decreased number of systems evaluated. While deficiencies noted with storage continue to be the greatest area of weakness.

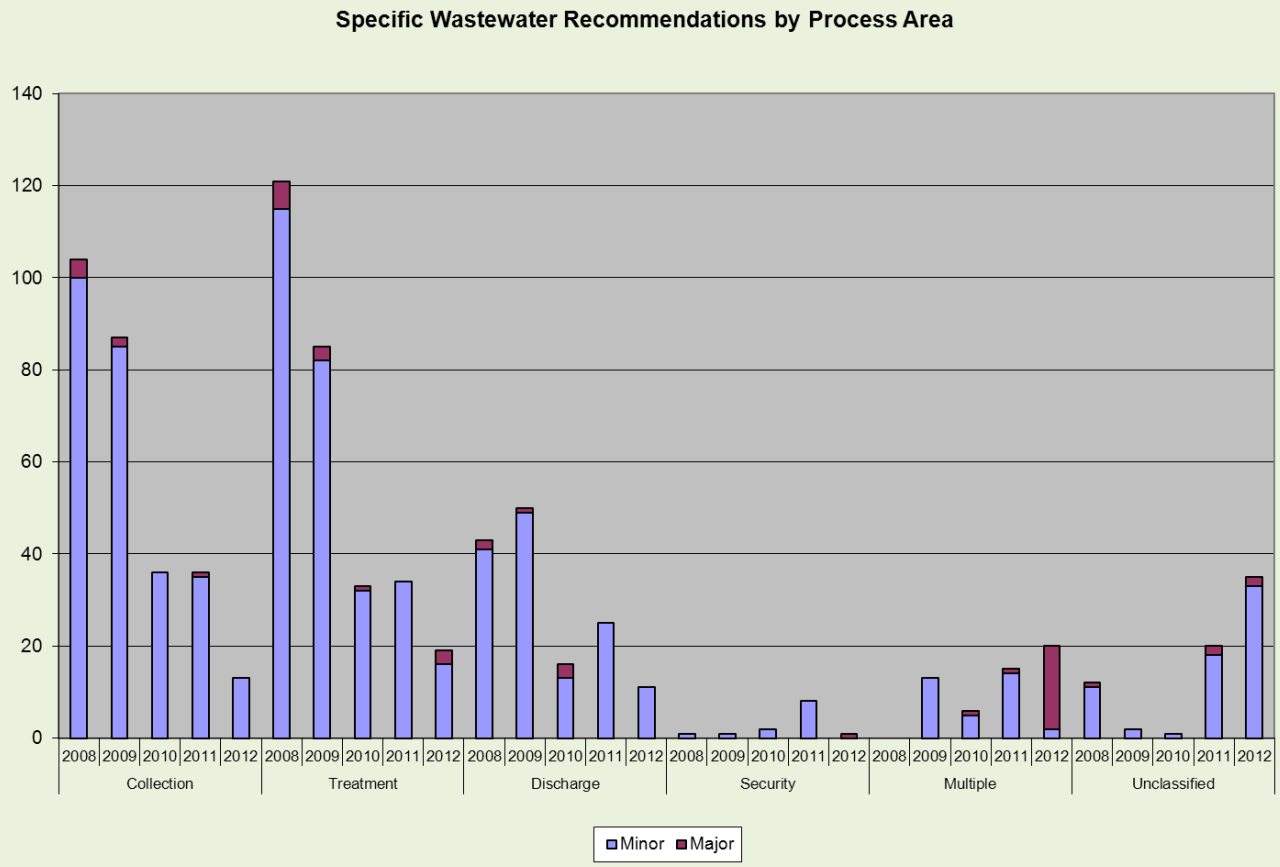


Figure 9. Wastewater System Recommendations by Process Area

This year (as shown on Figure 9), there was an increase in the relative number of major violations associated with treatment. This increase is likely an artifact of the increased prioritization of higher level treatment facilities. The majority of major violations were noted with multiple system areas, which would indicate systemic deficiencies.

FSB consultants discussed the results of each evaluation with the Park staff and suggested potential strategies to address the issues.

Goals for FY13 for Water/Waste Water

- Implementation of the Water and Wastewater Risk Factors assessment to study the underlying antecedents of non-compliance with the regulations.
- Development of a water and wastewater violation table for our evaluation database that allows for identification of specific issues and provides a level of prioritization associated with each violation.

Incidents from the Field

- YOSE – Ultimately ten cases of Hantavirus Pulmonary Syndrome were associated with visitors to YOSE during the summer of 2012. The Office of Public Health provided a multi-faceted response with CDR David Wong of the Epidemiology Branch, Dr. Danielle Buttke (joint appointment with NPS Office of Public Health and NPS Wildlife Health), and LCDR Adam Kramer of the Field Services Branch responding to supplement the Park resources and assist in the response. Activities included ongoing case finding, evaluation of facilities for rodent-proofing, and assessing air flow patterns within the suspected cabins.
- GRCA – During the summer, multiple river rafting trips developed symptoms consistent with norovirus. CAPT Joseph Winkelmaier covered these incidents and ascertained that the most common route of exposure for these trips was a participant arriving that was already ill.
- DEWA – CDR Craig Ungerecht provided information to park management regarding cases of swimmer's itch associated with lifeguards.
- Scabies – Multiple incidents of scabies were reported during the year. CAPT John Leffel worked with CDR Wong to provide information to REDW, and LCDR Kramer provided information to HAFE in conjunction with the NPS Office of Risk Management and Integrated Pest Management Programs.
- CEBR – One case of tickborne-relapsing fever was reported with a seasonal biologist. LCDR Kramer and CDR Wong worked with the Utah Department of Health, Centers for Disease Control, NPS Safety Program, NPS Integrated Pest Management Program, and Park Management to investigate and respond to this issue.
- EBLA – CAPT Leffel, LCDR Kurt Kesteloot, and Dr. Buttke assisted the park in examining acceptable water contaminant levels for use with cattle.
- Healthy Parks Healthy People – The Field Services Branch has worked to support the initiatives of the Office of Public Health including HPHP. This has been highlighted by the work done by LCDR Kesteloot in signing an MOU between the Midwest Region and the University of Nebraska. Other activities have involved consulting on menu planning with concessioners, providing guidance to concessioners that would like to use non-traditional food suppliers (such as local farmers), and answering questions about HPHP.
- Office of Risk Management Collaboration – The Field Services Branch has continued to work with the Office of Risk Management to achieve mutual goals and leverage our expertise. This has included doing joint mold investigations, joint water system evaluations, and working to make sure that both groups are involved in decision making in areas of overlapping responsibility.

Outcomes

The Field Services Branch has continued to work collaboratively amongst the other branches of the OPH and our sister divisions. Within most of the incidents noted above the list of individuals involved highlights the collaborative approach that is being implemented. We have strived to include stakeholders from the other divisions to provide the most thorough and useful information that we can to a Park when developing an intervention strategy.

Illness transmission events may be modeled by the AGENT-HOST-ENVIRONMENT triad. With this framework, all three pieces of the triad are necessary for an illness transmission to occur. The public health assessments performed by the FSB are aimed at the environmental piece and identifying practices or situations that would allow for the continued growth or survival of pathogens (if they are present) that would result in illness. For food safety, priority violations are the practices that are most often associated with foodborne outbreaks. As depicted in Figure 4, there has been an increase in the number of priority violations associated with restaurants, snack bars, and service facilities, with improper cold holding continuing to be the most prevalent priority violation. With the water and wastewater system evaluations there has been an overall decrease in major violations (except in problems affecting multiple portions of the wastewater system). This decrease is most likely an artifact of the decreased number of evaluations that were performed due to staffing shortages.

Operations Branch

The Operations Branch (OB) functions as the official personnel office for all officers detailed to DOI and each of its eight bureaus. This branch carries out the day-to-day administration and management of key commissioned corps operational functions, including officer development, awards, promotions, compensation, benefits, grievances, effectiveness reports, recruitment, hiring, transfers, and retirement. OB also provides counsel to officers, supervisors, and other DOI leaders on matters related to the operations management of the PHS.

OB serves as the primary liaison between the DOI, NPS, and PHS. It is the crucial link between the central business systems and processes of the Commissioned Corps and the officers assigned to various parks, regions, and operating divisions within DOI. OB administers the Interagency Agreement that authorizes the detail of Commissioned Officers to the DOI, provides NPS managers access to PHS systems for performance appraisals, processes leave requests, and facilitates other business processes.

The branch is responsible for the management of the division's annual base budget which involves conducting cost/benefit and multi-year fiscal planning analysis, participating in the forecast of funds needed for operation, preparing detailed financial plans, budgets, and schedules, and evaluating the efficiency of the program budget. Based on analytical findings, the branch develops recommendations and strategies that will enable the program to operate at its most efficient and effective level.

Personnel Actions

OB continues its efforts to provide a sufficient, competent and cost efficient public health workforce to meet the growing needs of DOI. In 2012, OB assisted with the placement of six and the retirement of five officers within DOI. The new hires included two calls to active duty and four transfers. The OB reduced hiring costs by aiding in the selection of highly competent and qualified officers at ranks lower than the billet level. This branch created, reviewed, and classified over 50 billets/position descriptions, making certain that all billets were at the appropriate level/rank.

Awards

In FY 2012, the Awards Committee was successful in getting one Engineer of the Year and eleven individual honor awards approved.

Amendment

The OB has worked for nearly two years to put all of the pieces together that culminated in an amendment to the Memorandum of Agreement (MOA) between the Department of the Interior (DOI) and the Department of Health and Human Services (HHS) for the purpose of clarifying the status of commissioned officers relative to eligibility to participate in DOI employee programs. This amendment is a significant achievement in support of the administrative needs of officers assigned to DOI. Negotiating this amendment involved high-level discussions with flag level officers at HHS and at the Assistant Secretary level at DOI, as well as navigation through difficult and important policy issues.

Direct Assignment Accomplishments/Highlights

CDR Theresa Gallagher serves as Bureau Industrial Hygienist for the Bureau of Reclamation (BOR). CDR Gallagher led a Reclamation exposure assessment work group with the intended objective to develop and finalize a bureau exposure assessment directive and standard (D&S). This was a challenging task due to the wide variation in the application of industrial hygiene practices within BOR. CDR Gallagher's efforts resulted in the development of an updated and effective exposure assessment D&S that was accepted and implemented by BOR.

CDR Gallagher was also charged with developing a bureau Hearing Loss Prevention Program (HLPP). During the development process, she initiated discussions with the National Institute for Occupational Safety and Health (NIOSH). Due to her initiative, Reclamation and NIOSH are partnering on several hearing loss prevention issues. The changes implemented in this HLLP D&S should prevent hearing loss by at least 25%.

CAPT Steven Bosiljevac serves as a Senior Engineer in the Pacific West Regional Office. CAPT Bosiljevac provided project management on sixteen projects and provided engineering support on eight separate projects. The sixteen projects included managing engineering consultants for the assessment and design for rehabilitation and replacement of various utility systems. These utility system upgrades included lift station replacements, electrical line installations, water and sewer line replacements, water

treatment upgrades, and water storage. All of these systems required assessments as to condition and determining the best engineering repairs for Life Cycle design. In addition, he was called upon by parks to provide engineering review and recommendations on eight projects involving a wide variety of facilities, including bridges, utility systems, and structural pier assessments. CAPT Bosiljevac established on-going testing and review of the Municipal Pier in San Francisco Bay to assess current loading capacities for safe visitor use.

CAPT Bosiljevac coordinated and presented five trainings for employees requiring Contracting Officer's Technical Representative credits. CAPT Bosiljevac has been cited for having excellent presentation skills and working extremely well with students in addressing any issues and questions. Over 100 employees participated in these training sessions.

LCDR Nathan Epling is the Park Civil Engineer for Blue Ridge Parkway. LCDR Epling promoted the health and safety of millions of visitors and hundreds of park employees by providing the program management and project leadership for 47 drinking water systems, over 90 sanitation facilities, five high and significant hazard dam facilities and three groundwater remediation projects through the Blue Ridge Parkway. LCDR Epling has developed innovative engineered solutions that fit not only within the funding and time constraints, but also respect the natural and cultural importance in which these park facilities are placed. . His efforts have led to significant improvement in the condition of public health infrastructure in several parks of the Southeast Region.

LT Tara Carolfi works as the Public Health Specialist for the Golden Gate National Recreation Area (GGNRA). LT Carolfi developed a precedent setting program to maintain visitor health that is applicable and used locally and available nationally. Her exceptional work of developing policy for food safety controls of temporary food events is directly benefitting her local park, other national parks around the country, and the Public Health Service. AT GGNRA, this Temporary Food Event Program will be used to inspect and permit over 300 events annually that will maintain public health for a projected 120,000 visitors. Additionally, the program will be adopted by other NPS park units nationwide that need a system to permit and inspect temporary food events. The creation of this program provides current and applicable policy that will allow accurate inspection and permitting methods according to the FDA Food Code for a range of temporary food events.

LTJG Russell Moore serves as a Civil Engineer in the Southeast Regional Facility Support Division. LTJG Moore was the primary driving force behind the design and construction of a project that re-initializes historic cisterns at San Juan National Historical Site. These cisterns and the labyrinth of collection and delivery system were designed and constructed to provide the forts with more than 1 million gallons of grey water. In addition, LTJG Moore developed the design task order to contract with an Architect and Engineering firm to perform the design necessary to re-initialize the cisterns at El Morro and San Cristobol. He managed the professionals working on the design flawlessly. The design was completed on time and allowed for the execution of construction right away.

LCDR Benjamin Marnell is a Civil Engineer in the Southeast Regional Facility Support Division. LCDR Marnell has aided in the review of construction documents and provided leadership to ensure a project

to replace an existing boat pier within the US Virgin Islands was completed. This pier is the only location where concession operations can temporarily dock their vessels while off-loading their passengers safely. This pier was damaged beyond repair during a tropical storm leaving the National Park Service with a situation where concession operators ere beaching their vessels and allowing passengers to debark off the bow of their boats. This was an unnecessary impact to a significant resource and safety issue. Beach erosion is a significant impact to this park, as the beach is not only used for recreation, but more importantly it is used by Hawksbill Sea Turtles, as a protected habitat to nest and lay their eggs. The construction of this pier provides the park's natural resource staff with the necessary access point to maintain their sea turtle management program, as well as a safe method for visitors to access the beautiful landscape and serenity of Buck Island. Without LCDR Marnell's excellent leadership and technical recommendations, damage would continue on the island, the parks turtle management program would suffer, and unsafe conditions would have continued possibly resulting in serious injuries.

Office of Public Health Contacts and Office Locations

The NPS Office of Public Health (OPH) is a national program with the mission of assisting agency and park unit management and staff with protecting and promoting the health of national park visitors. Issues may be referred to the regional contact listed below or to the Director, OPH.

Field Staff (Public Health Consultants)

NPS Region	PHC Office Location	Contact
Northeast	Philadelphia, PA	LCDR Russell Graham 215-597-5371 202-641-3286 (cell)
National Capital	Washington, DC	LCDR Adam Kramer 202-513-7056 202-641-0013 (cell)
Southeast (Supervisor)	Atlanta, GA	LTJG Jessica Sharpe 404-507-5730 202-641-3671 (cell)
Southeast	Jacksonville, FL	Vacant
Midwest	Omaha, NE	LCDR Kurt Kesteloot 402-661-1718 202-641-0055 (cell)
Intermountain (Supervisor) Region-wide Contact	Santa Fe, NM	CAPT Joe Winkelmaier 505-988-6040 202-641-3518 (cell)
Intermountain	Denver, CO	Vacant
Intermountain	Yellowstone National Park	LCDR George Larsen 307-344-2273 202-641-3434 (cell)
Intermountain	Flagstaff, AZ	LCDR Martin Stephens 928-638-7355 202-641-3582 (cell)
Pacific West	San Francisco, CA	CDR Craig Ungerecht 415-623-2271 202-641-0051 (cell)
Pacific NW/Alaska (Supervisor)	Seattle, WA	CAPT John Leffel 206-220-4270 202-641-0034 (cell)
Pacific NW/Alaska	Seattle, WA	Vacant
Pacific West (SEKI, CABR, CHIS, DEPO, JORT, MANZ, SAMO)	Sequoia/Kings Canyon NPS	Paul Schwarz 559-565-3144 559-288-3042 (cell)

National Park Service, Office of Public Health, Headquarters Staff

Director, Office of Public Health, Washington, DC

CAPT Chuck Higgins (202-513-7217)

The OPH Director manages the direct office of public health and coordinates the broader public health program, made up of the collective activities of PHS officers assigned throughout the National Park Service. This position also serves as the commanding officer for the U.S. Public Health Service Commissioned Corps operating division (OPDIV) embedded within NPS and tasked with assisting the DOI with public health issues.

Chief, Operations Branch, Washington, DC

Sonya Coakley (202-513-7215)

The Operations Branch Chief is responsible for managing program personnel selection and assignments as well as budget formulation, analysis, and tracking. Serving as the official Commissioned Corps Liaison, this position also provides an interface between Public Health Officers assigned to DOI and the Public Health Service Commissioned Corps.

Liaison for Science and Innovation, Washington, DC

LCDR Amy Chanlongbutra (202-513-7097)

The Liaison for Science and Innovation oversees science integrity and assists staff with applying the newest information in ways that promote continuous improvement.

Chief, Field Services Branch, Washington, DC

LCDR Adam Kramer (202-513-7056)

The Field Services Branch provides all of the direct field (environmental health) services of the division and is responsible for evaluating food safety, drinking water safety, waste water disposal, zoonotic/vector borne disease hazards and for providing consultation to individual park units on any and all public health issues.

Deputy Director for the Field Services Branch, Washington, DC

CDR Sara Newman, DrPH, MCP (202-513-7225)

The Deputy Director for the Field Services Branch provides management support, strategic planning, and program development to promote and support the work of the staff within the Field Services Branch. Serving as a liaison between the Office of Public Health and the Office of Risk Management, this position also identifies opportunities for increased collaboration between the two offices to better serve the needs of NPS.

Chief, Epidemiology Branch, Albuquerque, NM

CDR David Wong, MD (202-538-9969)

The Chief Epidemiologist is responsible for outbreak response, medical issues, applied epidemiologic research, and disease surveillance coordination with local, state, and federal health agencies.

Chief, Health Promotion Branch, St. Louis, MO

Diana Allen (202-360-6251)

The Health Promotion Chief carries out activities designed to tap into the power of parks and public lands to promote health and well-being. The primary program administered by this division is Healthy Parks Healthy People.

One Health Coordinator, Fort Collins, CO

LT Danielle Buttke, DVM, PhD, MPH, CPH (970-267-2118)

The One Health Coordinator is a joint position between the Wildlife Health Branch and Office of Public Health. One Health is the recognition that animal health, human health, and environmental health are all interlinked. The coordinator works to integrate wildlife health, human health, and environmental health in education, prevention, and response to health concerns that may involve any two of the three health components.

Note: Employee safety and health issues are handled by park, region, or WASO safety/risk management personnel. The NPS Risk Management Office can be contacted at 202-513-7218.